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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712,516

11/13/2003

Soeren Soholm

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EXAMINER

PRICE, CARL D

ART UNIT

PAPER NUMBER

3749

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/712,516

Applicant(s)

SOEHOLM ET AL.

Examiner

CARL D. PRICE

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/10/06; 4/26/06(RCE).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14, 20-25, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-14 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 20-25, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/05/2007 has been entered.

Response to Arguments

Response to Arguments

Applicant's arguments with respect to claims 1-4, 6-14, 20-25, 31 and 32 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended the claims to be of a scope not previously considered. Consistent with applicant's argument that the prior art relied on in the previous office action fail to show, disclose and/or teach certain aspects of applicant's invention now recited in the claims filed on 10/10/2006, for example applicant has amended the claims to include at least the following:

(Claim 1)

"... wherein the pressure controller is selectively operative in a rotation check mode in which at least one of the intake fan and the exhaust fan is provided with less than normal operating power in order that such fan rotates at less than normal operating speed such that a direction of rotation of the fan can be visually confirmed by an operator."

(Claim 7)

"... wherein the processor is further operative to control at least one of the intake fan and the exhaust fan in a bearing cycle mode in which, responsive to the processor determining that at least one of the intake fan and the exhaust fan has been inactive

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for a threshold time duration, the fan that has been inactive is activated such that internal components of that fan are lubricated.”

In regard to claim 1, the prior art reference of **US006348790 (Aler)** is now relied on to confirm the known technique of visually determining the direction of motor shafts which would have been obvious to a person having ordinary skill in the art, whether during normal operating speeds, or at slower shaft speeds such as during power off (i.e. - shut down), or power on (i.e. - initial start-up) of a system controlled by an on/off power switch or control necessarily forming a part of any electric powered system, such as the draft system of **US005205783A (Dieckert et al)**.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims: Rejected under 35 U.S.C. 103(a)

Claims **1-4, 6, 20-25, 31 and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over **US005205783A (Dieckert et al)** in view of **JP 01-102230, US2002/0014538A1 (Weimer et al)** and **US006348790 (Aler)**.

US005205783A (Dieckert et al) shows and discloses a draft system for a building space including:

- an intake fan (130) for drawing air from outside a mechanical room into the space;
- a plurality of appliances (144, C, O), each appliance having an air intake (64) for drawing air from the mechanical room into the appliance and having an exhaust (66) for exhausting air out of the appliance;
- ducts (66), connected to the air exhausts of the appliances, for transporting air outside the space;
- an exhaust fan (132), connected to the ducts, for drawing air from the ducts to the atmosphere;
- a pressure transducers (50-2) for receiving a first pressure reading from the inlet and exhaust of the space, the transducers outputting a differential pressure signal indicative of the difference between the first and second pressure readings; and
- a pressure controller for controlling the speed of the intake fan, the speed of the exhaust fan, and the operation of the plurality of appliances in response to the differential pressure signal.

US005205783A (Dieckert et al) shows and discloses the invention substantially as set forth in the claims with possible exception to:

- an appliance controller and relay boxes control more than **ten appliances** including boilers, furnaces, water heaters, or laundry dryers;
- an R5-232 for receiving the differential pressure signal from a differential transducer;

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- means for shutting down a plurality of appliances when a differential pressure exceeds a predetermined threshold;
- means for restarting the appliances in succession in an order based on a priority list; and
- means for monitoring the differential pressure to ensure that the means for restarting does not cause the differential pressure to exceed the predetermined threshold.

JP 01-102230 teaches, from the building ventilation field of endeavor a first pressure sensor (10), located within a building room for supplying a first pressure reading; and a second pressure sensor (9) located within the atmosphere exterior of the room for supplying a second pressure reading.

US2002/0014538A1 (Weimer et al) teaches, from the building ventilation field of endeavor, a draft system for a building space including:

- a fan (14, 100) for drawing air from a mechanical room;
- a plurality of appliances (72,74, 76), each appliance having an air intake (not shown) for drawing air from the mechanical room into the appliance and having an exhaust (not referenced) for exhausting air out of the appliance;
- a pressure transducers (18);
- a pressure controller (12) including an appliance controller, relay boxes for controlling the speed of the intake fan, the speed of the exhaust fan, and the operation of the plurality of appliances in response to the differential pressure signal;
- means for shutting down a plurality of appliances when a differential pressure exceeds a predetermined threshold;
- means for restarting the appliances in succession in an order based on a priority list; and

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- means for monitoring the differential pressure to ensure that the means for restarting does not cause the differential pressure to exceed the predetermined threshold.

Most notably, applicant's attention is directed to the follow text in US2002/0014538A1 (Weimer et al) that states:

[0035] Appliances 72, 74, 76 are interfaced and connected to the controller 12 via the appliance interfaces 38, 40, and additional appliances are interfaceable via further connections supplied by the expansion board interfaces 42, 44, 46. As a result, it should be understood that the use of a finite number of appliances is only for the purpose of illustration and explanation and is not to be interpreted as limiting the number of appliances interfaceable with the controller 12. For example, a preferred embodiment of the controller 12, as seen in FIG. 2, shows two appliance interfaces 38, 40 on the controller 12 circuit board, and expansion board interfaces 42, 44, 46 for interfacing numerous additional appliances. For explanation purposes, discussions of appliances will generally be directed to fuel burning appliances such as boilers, water heaters, and furnaces. However, it is envisioned that other appliances, including non-fuel-burning appliances will be just as interfaceable with the controller 12.

[0038] The display 54 and the keypad 56 are in electronic communication with the controller's 12 display circuitry 48 and keypad circuitry 50, respectively.

[0047] If the microcontroller 28 determines that power up of the appliance 72 is allowable, the circuit will be closed, thus triggering the relay switch 41, and start up will be granted for the appliance 72 to begin operation. The microcontroller 28 can place restrictions on start up. For example, start up may only be granted when readings from sensor 18 are within a specific range, after a specific time, within a specific time interval, if other appliances are not currently up on the system 10, or based on a myriad of other computations and processing algorithms within the microcontroller 28."

[0048] The controller 12 interface with each appliance is continuous. Furthermore, at any point, the controller 12 can deny activation to the interfaced appliance. Specifically, this becomes important in dealing with system-wide difficulties in maintaining a specific environmental parameter, such as pressure. If the controller 12 is unable to maintain a requisite parameter setting, such as pressure, power adjustments are first made to the fan 14 in an attempt to bring the deviating pressure within the enclosed environment 16 under control. If the microcontroller 28 determines that if after a specific time

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count, such as 10 seconds, the variable adjustments to the fan 14 have failed to rectify the problem (the inputted pressure parameter is not met), an adjustment on the demands of the system 10 will be addressed before performing a general shut down of all the interfaced appliances. For instance, using the previous boiler analysis, the microcontroller 28 will review the stored time data for power ups in memory 52. The last appliance to start up will be pulled from this data and the appliance interface 38 circuitry within the appliance 72 will be opened so that the appliance 72 is shut down. Using control code and algorithms imbedded within the microcontroller 28, similar decisions can be made by the microcontroller 28 due to the individual information being stored for each appliance and the ability of the microcontroller 28 to selectively control each individual appliance interfaced with the controller 12 through the appliance interfaces 38, 40 and any expansion board interfaces 42, 44, 46.

US006348790 (Aler) teaches, from applicant's same motor driven apparatus field of endeavor, that:

"Knowledge of the proper direction of motor shaft rotation is essential when integrating today's industrial motors within systems and machines designed to perform particular applications and tasks. Previously, one could view the direction of motor shaft rotation because few motors possessed hidden shafts or shafts covered by a safety guard. However, as time progressed, regulatory requirements, specific applications, and economic considerations required many motor shafts to become hidden in housings, covered with safety guards, or made an integral part of a mechanical assembly. This inhibited visible determination of the direction of motor shaft rotation. Although rotation direction could still be determined by viewing the motor prior to assembly within the machine or by viewing the process results, these methods often proved inadequate for a number of reasons. First, costly equipment may be damaged by reverse operation for any period above a short time interval; viewing the results of a process that takes even a relatively small amount of time to complete may result in irreparable damage to the machine. Moreover, reverse operation of shaft rotation may not be obvious from viewing the results and may inadvertently be accepted as normal. In addition, original equipment vendors may have a need to check rotation of hidden shaft units so that the final manufacturer can install the motor without the cost of re-connecting motors to obtain the proper shaft rotation."

(Highlighting and Underlining Added)

In regard to claims 1-4, 6, 20-25, 31 and 32, for the same purpose of maintaining proper or desirable ventilation of a building space, it would have been obvious to a person having ordinary skill in the art to monitor and control a building ventilation system of US005205783A (Dieckert et al) according to a differential values and signals obtained from a first pressure sensor located within a building room for supplying a first pressure reading and a second

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pressure sensor located within the atmosphere exterior of the room for supplying a second pressure reading, in view of the teaching of **JP 01-102230**. Also, in regard to claims **1-4, 6, 20-25, 31** and **32**, for the purpose of controlling environmental characteristics to reduce the costs associated with the manufacturing and every day operation of a plurality of separate air control systems, it would have been obvious to a person having ordinary skill in the art to operate the **US005205783A (Dieckert et al)** ventilation control system with a single controller operating with any necessary and known customary relays, port connection (e.g. – “RS-232” port) and responding to any necessary characteristics such as the physical layout and/or relative proximity of the various system components (i.e. – relative location of any one appliance with regard to the exhaust), and arranged to controlling and interacting with fuel burning and/or non-fuel burning appliances, in view of the teaching of **US2002/0014538A1 (Weimer et al)**. Also, in regard to claims **1-4** and **6**, the draft system of **US005205783A (Dieckert et al)** necessarily and inherently includes controller is selectively operative in a rotation check mode in which at least one of the intake fan and the exhaust fan is provided with less than normal operating power, in the manner broadly set forth in applicant’s claims. That is, the main power supply control, or on/off switch, necessarily incorporated in the draft system of **US005205783A (Dieckert et al)** inherently forms a controller which when selectively operated (i.e. – during shutdown) less than normal operating power in order that such fan rotates at less than normal operating speed such that a direction of rotation of the fan can be visually confirmed by an operator as it is known one could view the direction of motor shaft rotation, as taught by **US006348790 (Aler)**.

Allowable Subject Matter

Claims 7-14 are allowed.

Conclusion

See the attached USPTO form 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

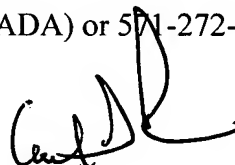
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USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Josiah Cocks can be reached on (571) 272-4874. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



CARL D. PRICE

Primary Examiner

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cp